

Remarks/Arguments:

Claims 1-3, 5, 7, 9-12, 18-24 and 26-31 are pending in the above-identified application. Claims 1-3, 5, 7, 9-12, 18-24, 26-27 and 31 are indicated as being allowed.

Claim 28 was rejected under 35 U.S.C. § 103 (a) as being obvious in view of Campbell et al. and Hong. Applicant respectfully requests reconsideration of this rejection.

With regard to claim 1, neither Campbell et al., Hong, nor their combination disclose or suggest,

... an edge detector that determines whether a target picture element (pixel) position of an interpolated row of pixels lies on an edge between visually distinct regions of a current image defined by the interlace scan video signal **to provide an edge flag** ...

... a weighted averaging circuit that, **responsive to the edge flag**, combines the intra-field interpolated pixel value and the non-linear inter-field interpolated pixel value in proportion to the static level value to produce an output interpolated pixel value for the progressive scan video image.

Basis for this amendment may be found, for example, in claim 19, paragraphs [0029] and [0030] and Fig. 1.

Campbell et al. include an intra-field interpolator 28, a temporal median filter interpolator 22, a motion detector and a switch 26. The temporal median filter interpolator 22 receives three spatial average input values from fields F0, F1 and F2 and outputs a median value from the three input values for each pixel to be interpolated. (Col. 6, lines 35-45). Switch 26 switches between the output of intra-field interpolator 28 and temporal median filter interpolator 22 depending on whether the motion amplitude is above or below a threshold value. (Col. 6, lines 58-62). The outputs of intra-field interpolator 28 and temporal median filter interpolator 22 are multiplied by a control signal based on two fractional multipliers (k and $(1-k)$). Campbell et al. do not, however, combine the pixel values responsive to an edge flag. In fact, Campbell et al. do not disclose an edge detector of any kind. Thus, Campbell et al. do not disclose "...a weighted averaging circuit that, **responsive to the edge flag, combines the intra-field interpolated pixel value and the non-linear inter-field interpolated pixel value,**" as recited in claim 28.

Hong determines whether an inter-field variation is larger than an intra-field variation, based on a determination signal from an inter-field/intra-field determination processor. An intra-field pseudo median filter is used to calculate a pixel value to be finally used in interpolation when the inter-field variation is larger than the intra-field variation. An inter-field pseudo median filter is used to calculate the pixel value when the intra-field variation is larger than the inter-field variation. Hong also does not, however, disclose an edge detector of any kind. Thus, Hong also does not disclose "...a weighted averaging circuit that, **responsive to the edge flag, combines the intra-field interpolated pixel value and the non-linear inter-field interpolated pixel value,**" as recited in claim 28.

Because neither Campbell et al., Hong, nor their combination disclose or suggest the features of claim 28, claim 28 is not subject to rejection under 35 U.S.C. § 103 (a) in view of Campbell et al. and Hong.

Claim 29 was rejected under 35 U.S.C. § 103 (a) as being obvious in view of Campbell et al., Hong and Jiang et al. Applicant respectfully requests reconsideration of this rejection. As described above, neither Campbell et al., Hong, nor their combination disclose or suggest the features of claim 28.

Jiang et al. recites "... the deinterlacing calculation will generate the intensity of pixel X by taking more of its value from the next field and using less interpolation from the existing pixels surrounding pixel X in its current field ..." That is, Jiang et al. discloses generating a single interpolated pixel value having inter-field and intra-field components. Jiang et al. does not disclose generating both "an intra-field interpolated pixel value" and "a non-linear inter-field interpolated pixel value" and then combining the two pixel values. Further, Jiang et al. does not disclose generating a non-linear interpolated pixel value. Thus, Jiang et al. also does not disclose or suggest "...a weighted averaging circuit that, **responsive to the edge flag, combines the intra-field interpolated pixel value and the non-linear inter-field interpolated pixel value,**" as recited in claim 28.

Thus, neither Campbell et al., Hong, Jiang et al., nor their combination disclose or suggest the features of claim 28. Claim 29 depends from claim 28. Thus, claim 29 is also not subject to rejection under 35 U.S.C. § 103 (a) in view of Campbell et al., Hong and Jiang et al.

Applicants appreciate the indication in the Office Action that claim 30 would be allowable if amended to be independent and to include all of the limitations of its base claim and any intervening claims. Because, as described above, claims 28 and 29 are in condition for allowance, no amendment to claim 30 is needed.

In view of the foregoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the rejection of claims 28 and 29.

Respectfully submitted,



Kenneth N. Nigon, Reg. No. 31,549
Attorney for Applicants

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Dated: March 10, 2008

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